Amendments to the Claims:

Please amend claims 1 and 15. Please add new claims 28-33. Please cancel claims 5-14 and 19-27 without prejudice. This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A reconfigurable computer system comprising:

a central processing unit implemented on at least one programmable logic ~~device~~resource; ~~and~~

programmable logic coupled to the central processing unit ~~that~~, wherein the programmable logic is reconfigurable to optimize the ability of the computer system to handle a given application; and

a secondary storage device that stores configuration data for the programmable logic.

2. (Original) The reconfigurable computer system defined in claim 1 further comprising non-volatile memory coupled to the programmable logic, wherein the non-volatile memory stores initial configuration data that is used by the programmable logic during a boot phase.

3

3. (Original) The reconfigurable computer system defined in claim 1 further comprising random-access memory coupled to the programmable logic, wherein the random access memory stores data and state information.

4. (Original) The reconfigurable computer system defined in claim 1 further comprising input-output circuitry implemented in programmable logic, wherein the input-output circuitry is coupled to the central processing unit and the programmable logic.

5-14. (Cancelled)

15. (Currently Amended) A method for managing resources in a reconfigurable computer that contains programmable logic resources that are reconfigurable to optimize the ability of the computer to handle a given application comprising:

managing programmable logic resource allocation with a virtual logic manager

swapping configuration data between a secondary storage device and the programmable logic

resources during programmable logic resource allocation
using a virtual logic manager.

16. (Original) The method defined in claim 15
wherein the reconfigurable computer includes a central
processing unit implemented on at least one programmable
logic device and programmable logic coupled to the
central processing unit, wherein the programmable logic
is reconfigurable to optimize the ability of the computer
system to handle a given application.

17. (Original) The method defined in claim 15
wherein the reconfigurable computer includes a central
processing unit implemented on a microprocessor and
programmable logic coupled to the central processing
unit, wherein the programmable logic is reconfigurable to
optimize the ability of the computer system to handle a
given application.

18. (Original) The method defined in claim 15
wherein the reconfigurable computer includes a central
processing unit that is partially implemented on a
microprocessor and that is partially implemented on a
programmable logic device and programmable logic coupled

to the central processing unit, wherein the programmable

logic is reconfigurable to optimize the ability of the

computer system to handle a given application.

19-27. (Cancelled)

28. (New) A method for managing resources in a

computer that contains programmable logic resources that

are reconfigurable to optimize the ability of the

computer to handle a given application having multiple

functions comprising:

during run-time, using a virtual computer

operating system to determine whether to use a hardware

implementation or a software implementation for a given

one of the multiple functions of the given application.

29. (New) The method of claim 28 wherein using

the virtual computer operating system comprises:

using the virtual computer operating

system to determine whether there are sufficient

programmable logic resources available to be reconfigured

to perform the given function of the application;

using the virtual computer operating

system to measure the performance of the application at

run-time and to compare the measured performance to

specified performance requirements;

using the virtual computer operating system to allocate the programmable logic resources among the multiple functions of the application based on the comparison of the measured performance to the specified performance requirements; and

using the virtual computer operating system to determine whether the hardware implementation or the software implementation is to be used for the given function based on the comparison of the measured performance to the specified performance requirements.

30. (New) The method of claim 29 further comprising time-multiplexing the programmable logic resources among the multiple functions of the given application.

31. (New) The method of claim 30 wherein time-multiplexing comprises loading a subset of functions of the multiple functions of the given application on the programmable logic resources for a predetermined time interval.

32. (New) The method of claim 29 further comprising loading a function of the given application into at least one of the programmable logic resources

prior to the function being required by the programmable

logic resource when the programmable logic resource is

idle.

   33. (New) The method of claim 29 further

comprising defragmenting the programmable logic

resources.